

AMENDMENTS TO THE SPECIFICATION:

Please replace the paragraph beginning at page 1, line 4, with the following rewritten paragraph:

The present invention relates to a process for forming a pattern of a semiconductor device used in a liquid crystal display apparatus and a method for producing a liquid crystal display apparatus using the process for forming a pattern, and in particular, to a process for forming a ~~pattern and capable of forming~~ a complicated pattern such as wiring in a simplified manner, and a method for producing a liquid crystal display apparatus using the process ~~for forming a pattern~~.

Please replace the paragraph beginning at page 1, line 13, with the following rewritten paragraph:

A method for producing a liquid crystal display apparatus uses a photolithography technique and a dry etching technique ~~that are used for producing~~ to produce an integrated circuit. ~~Therefore, as is seen in activities to~~ To reduce process steps for producing the integrated circuit~~[[,]]~~ in the process for producing a liquid crystal display apparatus, ~~efforts in~~ methods for reducing the number of the total process steps for forming patterns such as wirings are exercised as well as methods to reduce the production cost thereof.

Please replace the paragraph beginning at page 1, line 21, with the following rewritten paragraph:

Among a variety of proposals to greatly reduce the production cost ~~to a great extent, such~~ , one method proposes that two or more PR process steps required in the conventional technique can be reduced to only one process step ~~has been proposed~~.

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Please replace the paragraph beginning at page 2, line 1, with the following rewritten paragraph:

That is, the first conventional example (JP-A-2000-206571) applies the above-stated method to a manufacturing process of an inversely staggered thin film transistor (hereinafter referred to as a "TFT"), and FIGS. 1A to 2B are schematic cross sectional views of associated regions in a vicinity of a TFT showing main process steps ~~in~~ of the ~~order of~~ manufacturing process.

Please replace the paragraph bridging pages 2 and 3, beginning at page 2, line 27, with the following rewritten paragraph:

As shown in FIG. 2B, the metal film 543 and the n+ type a-Si film 542 ~~thereunder metal film~~ are etched and removed by using the remaining thick photosensitive film pattern 527 as a mask. At this time, a part of the a-Si film 541 is simultaneously etched.

Please replace the paragraph beginning at page 3, line 4, with the following rewritten paragraph:

As described above, two different patterns of the film to be etched can be formed by utilizing the photosensitive film patterns 527 and 526 having ~~a difference in~~ different film ~~thickness~~ thicknesses.

Please replace the paragraph beginning at page 3, line 7, with the following rewritten paragraph:

Also the following second conventional example (JP-A-2000-164584) applies the above-stated method to a manufacturing process of an inversely staggered TFT, and FIGS. 3A to 3C are

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schematic cross sectional views of a ~~vicinity~~ region of a TFT, a gate terminal electrode and a drain terminal electrode showing the main process steps in the order of manufacturing process.

Please replace the paragraph beginning at page 5, line 1, with the following rewritten paragraph:

However, in the first and second conventional examples, when the thin photosensitive film pattern out of the photosensitive film pattern is etched and removed, the thick photosensitive film pattern is also etched to have an appearance largely different from that of the thick photosensitive film pattern before being etched since the appearance of the thick photosensitive film pattern is continuously changed in accordance with passage of time during the etching. Therefore, it is expected that by using the thick photosensitive film pattern as a mask, the film to be etched is etched to have a pattern ~~largely~~ greatly different from that designed by a process designer.

Please replace the paragraph beginning at page 6, line 18, with the following rewritten paragraph:

According to the first aspect of the process for forming a pattern in accordance with the invention, the remaining resist pattern is formed to have a pattern different from the resist pattern used in the first patterning step and in addition, nearly equal to the pattern of the second resist film before the resist etching step, and therefore, when subjecting the film to be etched to a second patterning step, the pattern of the second resist film can be transferred with high accuracy to the film to be etched by using the remaining resist pattern as a mask.[[.]]

Please replace the paragraph beginning at page 8, line 6, with the following rewritten paragraph:

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According to the third aspect of the process for forming a pattern in accordance with the invention, the remaining resist pattern is formed to have a pattern different from the resist pattern used in the first patterning step and in addition, nearly equal to the pattern of the second resist film before the resist etching step, and therefore, when subjecting the film to be etched to a second patterning step, the pattern of the second resist film can be transferred with high accuracy to the film to be etched by using the remaining resist pattern as a mask.[[.]]

Please replace the paragraph beginning at page 14, line 4, with the following rewritten paragraph:

As the second resist film, a novolak resin or a polyvinyl phenol is employed to make a phenolic hydroxide group contained therein, which reacts with the silylating agent to form siloxane, polysiloxane, polysilane, polysilyne or carbosilane in the surface of the second resist film.

Please replace the paragraph beginning at page 14, line 14, with the following rewritten paragraph:

The above-described plasma treatment makes the silylated film oxidized changing it into a silica film 10. The silica film 10 is formed such that silicon contained in the silylated film reacts with oxygen to change the silylated film into an oxide film. Note that although O₂/SF₆/He gas is used in the plasma treatment, other mixed gas containing oxygen may also be used. For example, in the case where a mixture of an O₂ gas and an inert gas is employed, an O₂/He gas or an O₂/Ar gas can be used, and in the case where a mixture of an O₂ gas and a fluorine series gas is employed, an O₂/SF₆ gas, an O₂/CF₄ gas or an O₂/CHF₃ gas can be used.

Please replace the paragraph bridging pages 23 and 24, beginning at page 23, line 20, with the following rewritten paragraph:

As is seen in this embodiment, the first patterning step is carried out in the process steps of ~~FIGS. 11 to FIG. 12~~ FIGS. 11A-11C to FIG. 12A, and the resist etching step (ashing) is carried out in the process steps of ~~FIGS. 12 to FIG. 13~~ FIGS. 12A-12C to FIG. 13A. The silica film 110 is formed such that the silylated film is oxidized by the plasma treatment that uses a gas mainly including oxygen. The silica film 110 is scarcely affected by the ashing that uses a gas including mainly O₂ gas. Therefore, the silica film 110 can maintain its planar shape nearly equal to that of the silica film 110 (i.e., the resist mask 107) before the ashing. As a result, the resist mask 107 is formed nearly equal to the designed pattern with high controllability to thereby form the concave portion 112 nearly equal to the designed pattern. Accordingly, the pixel electrode 139 and the drain terminal electrode 178 can be formed approximately equal to the designed pattern since the pixel electrode 139 and the drain terminal electrode 178 are formed by using the silica film 110 and the resist mask 111 as a mask, both of which are patterned with high accuracy.

Please replace the paragraph bridging pages 28 and 29, beginning at page 28, line 23, with the following rewritten paragraph:

The passivation film 440 and the gate insulating film 134 above the gate terminal electrode and the passivation film 440 above the drain terminal electrode 178 are etched and removed by using the first resist film 423 and the second resist film 424 as a mask to expose surfaces of the gate terminal electrode and the drain terminal electrode and ~~the to~~ form contact holes 435, 455, respectively (the first patterning step; refer to FIGS. 19A to 19C).

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